

Risk Factors for Epithelial Ovarian Cancer-Associated Venous Thromboembolism were not Identical on Different Continents

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Abstract

Objective: To confirm the differences in the risk factors for epithelial ovarian cancer-associated venous thromboembolism (EOC-VTE) among patients on different continents. **Methods:** We reviewed all EOC-VTE cases from two tertiary hospitals for ten years. Multivariate logistic regression analysis was used to identify significant risk factors for VTE. Then we searched the literature on EOC-VTE risk assessments. The risk factors presented in the acquired literature and our data were evaluated by meta-analysis. Two subgroups, according to the continents mentioned in the studies, were set as Asia and Europe & America, respectively for analyzation. **Results:** A total of 122 patients with EOC-VTE were included. We found six significant risk factors for VTE among cases of EOC by multivariate logistic regression analysis. Among the 2064 initial articles, only 30 met the inclusion criteria. Including our data, there were cumulative 1432 cases and 9874 controls. The meta-analysis selected 13 out of 23 possible risk factors. Risk factors were not identical between subgroups. Except for five same elements, the Asia subgroup had six other significant risk factors for EOC-VTE that were preoperative D-Dimer $> 0.3\text{mg/L}$ (OR: 5.030, 95% CI: 2.003-12.635), surgery time [?] 180min (OR: 3.459, 95% CI: 2.198-5.441), WHO performance status score > 1 (OR: 2.847, 95% CI: 1.840-4.405), hypertension (OR: 1.945, 95% CI: 1.238-3.058), age [?] 60 years (OR: 1.821, 95% CI: 1.374-2.413) and preoperative blood platelet $> 300 \times 10^9/\text{L}$ (OR: 1.532, 95% CI: 1.025-2.289). Accordingly, another two significant risk factors were found in Europe & America subgroup, which were the initial FIGO stage (III/IV) (OR: 2.837, 95% CI: 2.147-3.748) and postmenopausal status (OR: 1.926, 95% CI: 1.025-3.622). Six EOC-VTE risk factors in our data were covered by the 11 risk factors of Asian subgroup analyzes. **Conclusions:** Patients in Asia and Europe & America have different risk factors for EOC-VTE.

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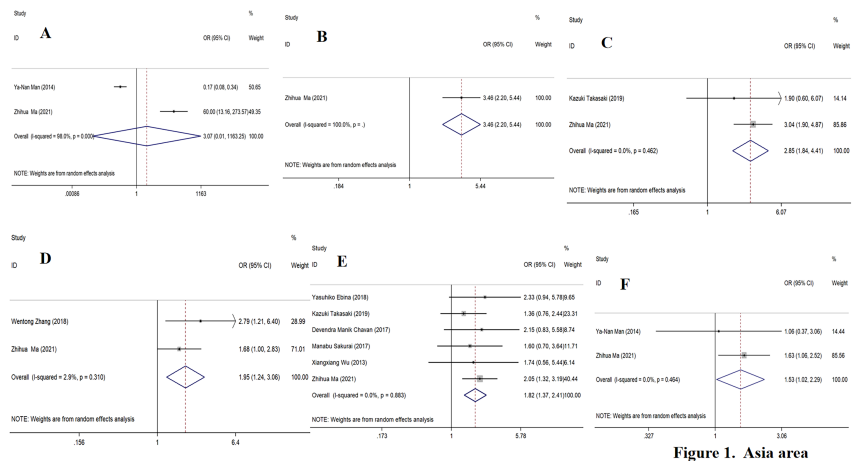


Figure 1. Asia area

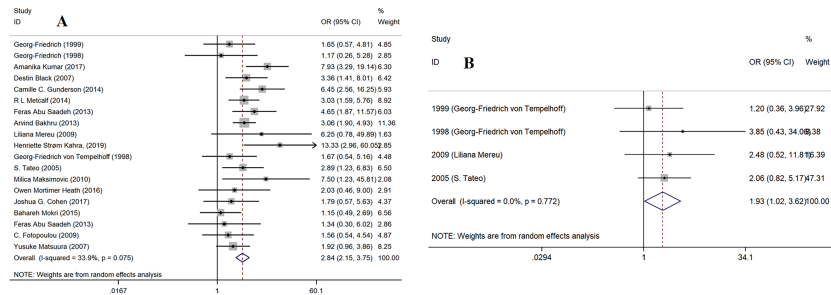


Figure 2. Europe&America area